



SEQUENCE LISTING

<110> ROEMISCH, GUERGEN
STOEHR, HANS-ARNOLD
FEUSSNER, ANNETTE
LANG, WIEGAND
WEIMER, THOMAS
BECKER, MARGRET
NERLICH, CLAUDIA
MUTH-NAUMANN, GUDRUN

<120> MUTANTS OF THE FACTOR VII-ACTIVATING PROTEASE AND
DETECTION METHODS USING SPECIFIC ANTIBODIES

<130> 06478.1457

<140> 09/912,559

<141> 2001-07-26

<150> DE 100 36 641.4

<151> 2000-07-26

<150> DE 100 50 040.4

<151> 2000-10-10

<150> DE 100 52 319.6

<151> 2000-10-21

<150> DE 101 18 706.8

<151> 2001-04-12

<160> 4

<170> PatentIn Ver. 2.1

<210> 1

<211> 1683

<212> DNA

<213> Homo sapiens

<400> 1

```
atgtttgcca ggatgtctga tctccatggt ctgctgttaa tggctctggt gggaaagaca 60
gcctgtgggt tctccctgat gtctttattg gaaagcctgg acccagactg gacccctgac 120
cagtatgatt acagctacga ggattataat caggaagaga acaccagtag cacacttacc 180
catgctgaga atcctgactg gtactacact gaggaccaag ctgatccatg ccagcccaac 240
ccctgtgaac acggtgggga ctgcctcgtc catgggagca ccttcacatg cagctgcctg 300
gtccttttct ctgggaataa gtgtcagaaa gtgcaaaaata cgtgcaagga caacccatgt 360
ggccggggcc aatgtctcat taccagagt cctccctact accgctgtgt ctgtaaacac 420
ccttacacag gtcccagctg ctcccaagtg gttcctgtat gcaggccaaa cccctgccag 480
aatggggcta cctgctcccc gcataagcgg agatccaagt tcacctgtgc ctgtcccgac 540
cagttcaagg ggaaattctg tgaaataggt tctgatgact gctatgttgg cgatggctac 600
tcttaccgag ggaaaatgaa taggacagtc aaccagcatg cgtgccttta ctggaactcc 660
cacctcctct tgcaggagaa ttacaacatg tttatggagg atgctgaaac ccatgggatt 720
ggggaacaca atttctgcag aaaccagat gcggacgaaa agccctggtg ctttattaaa 780
gttaccaatg acaaggtgaa atgggaatac tgtgatgtct cagcctgctc agcccaggac 840
gttgcttacc cagaggaaag cccactgag ccatcaacca agcttccggg gtttgactcc 900
tgtgaaaga ctgagatagc agagaggaag atcaagagaa tctatggagg ctttaagagc 960
acggcgggca agcaccatg gcaggcgtcc ctccagtcct cgctgcctct gaccatctcc 1020
```

```

atgccccagg gccacttctg tgggtggggcg ctgatccacc cctgctgggt gctcactgct 1080
gccactgca ccgacataaa aaccagacat ctaaagggtg tgctagggga ccaggacctg 1140
aagaaagaag aatttcatga gcagagcttt aggggtggaga agatattcaa gtacagccac 1200
tacaatgaaa gagatgagat tccccacaat gatattgcat tgcctcaagt aaagccagt 1260
gatggctact gtgctctaga atccaaatac gtgaagactg tgtgcttgcc tgatgggtcc 1320
tttccctctg ggagtgagt ccacatctct ggctgggggtg ttacagaaac aggaaaagg 1380
tcccgcagc tcctggatgc caaagtcaag ctgattgcca acactttgtg caactccgc 1440
caactctatg accacatgat tgatgacagt atgatctgtg caggaaatct tcagaaacct 1500
gggcaagaca cctgccaggg tgactctgga ggccccctga cctgtgagaa ggacggcacc 1560
tactacgtct atgggatagt gagctggggc ctggagtgtg ggaagaggcc aggggtctac 1620
acccaagtta ccaaattcct gaattggatc aaagccacca tcaaaagtga aagtggcttc 1680
taa
1683

```

<210> 2

<211> 1683

<212> DNA

<213> Homo sapiens

<400> 2

```

atgtttgcca ggatgtctga tctccatgtt ctgctgttaa tggctctgggt gggaaagaca 60
gcctgtgggt tctccctgat gtctttattg gaaagcctgg acccagactg gacccctgac 120
cagtatgatt acagctacga ggattataat caggaagaga acaccagtag cacacttacc 180
catgctgaga atcctgactg gtactacact gaggaccaag ctgatccatg ccagcccaac 240
ccctgtgaac acgggtgggga ctgcctcgtc catgggagca ccttcacatg cagctgctcg 300
gctcctttct ctgggaataa gtgtcagaaa gtgcaaaata cgtgcaagga caacccatgt 360
ggccggggcc aatgtctcat taccagagt cctccctact accgctgtgt ctgtaaaccac 420
ccttacacag gtcccagctg ctccaagtg gttcctgtat gcaggccaaa cccctgccag 480
aatggggcta cctgctcccg gcataagcgg agatccaagt tcacctgtgc ctgtcccgac 540
cagttcaagg ggaaattctg tgaaataggt tctgatgact gctatgttgg cgatggctac 600
tcttaccgag ggaaaatgaa taggacagtc aaccagcatg cgtgccttta ctggaactcc 660
cacctcctct tgcaggagaa ttacaacatg tttatggagg atgctgaaac ccatgggatt 720
ggggaacaca atttctgcag aaaccagat gcggacgaaa agccctgggtg ctttattaaa 780
gttaccatg acaagggtgaa atgggaatac tgtgatgtct cagcctgtct agccaggac 840
gttgccctacc cagaggaaag cccactgag ccatcaacca agcttccggg gtttgactcc 900
tgtggaaaaga ctgagatagc agagaggaag atcaagagaa tctatggagg ctttaagagc 960
acggcgggca agcaccatg gcaggcgtcc ctccagtcct cgctgcctct gaccatctcc 1020
atgccccagg gccacttctg tgggtggggcg ctgatccacc cctgctgggt gctcactgct 1080
gccactgca ccgacataaa aaccagacat ctaaagggtg tgctagggga ccaggacctg 1140
aagaaagaag aatttcatga gcagagcttt aggggtgcaga agatattcaa gtacagccac 1200
tacaatgaaa gagatgagat tccccacaat gatattgcat tgcctcaagt aaagccagt 1260
gatggctact gtgctctaga atccaaatac gtgaagactg tgtgcttgcc tgatgggtcc 1320
tttccctctg ggagtgagt ccacatctct ggctgggggtg ttacagaaac aggaaaagg 1380
tcccgcagc tcctggatgc caaagtcaag ctgattgcca acactttgtg caactccgc 1440
caactctatg accacatgat tgatgacagt atgatctgtg caggaaatct tcagaaacct 1500
gggcaagaca cctgccaggg tgactctgga ggccccctga cctgtgagaa ggacggcacc 1560
tactacgtct atgggatagt gagctggggc ctggagtgtg agaagaggcc aggggtctac 1620
acccaagtta ccaaattcct gaattggatc aaagccacca tcaaaagtga aagtggcttc 1680
taa
1683

```

<210> 3

<211> 560

<212> PRT

<213> Homo sapiens

<400> 3

Met	Phe	Ala	Arg	Met	Ser	Asp	Leu	His	Val	Leu	Leu	Leu	Met	Ala	Leu	1	5	10	15
Val	Gly	Lys	Thr	Ala	Cys	Gly	Phe	Ser	Leu	Met	Ser	Leu	Leu	Glu	Ser	20	25	30	
Leu	Asp	Pro	Asp	Trp	Thr	Pro	Asp	Gln	Tyr	Asp	Tyr	Ser	Tyr	Glu	Asp	35	40	45	
Tyr	Asn	Gln	Glu	Glu	Asn	Thr	Ser	Ser	Thr	Leu	Thr	His	Ala	Glu	Asn	50	55	60	
Pro	Asp	Trp	Tyr	Tyr	Thr	Glu	Asp	Gln	Ala	Asp	Pro	Cys	Gln	Pro	Asn	65	70	75	80
Pro	Cys	Glu	His	Gly	Gly	Asp	Cys	Leu	Val	His	Gly	Ser	Thr	Phe	Thr	85	90	95	
Cys	Ser	Cys	Leu	Ala	Pro	Phe	Ser	Gly	Asn	Lys	Cys	Gln	Lys	Val	Gln	100	105	110	
Asn	Thr	Cys	Lys	Asp	Asn	Pro	Cys	Gly	Arg	Gly	Gln	Cys	Leu	Ile	Thr	115	120	125	
Gln	Ser	Pro	Pro	Tyr	Tyr	Arg	Cys	Val	Cys	Lys	His	Pro	Tyr	Thr	Gly	130	135	140	
Pro	Ser	Cys	Ser	Gln	Val	Val	Pro	Val	Cys	Arg	Pro	Asn	Pro	Cys	Gln	145	150	155	160
Asn	Gly	Ala	Thr	Cys	Ser	Arg	His	Lys	Arg	Arg	Ser	Lys	Phe	Thr	Cys	165	170	175	
Ala	Cys	Pro	Asp	Gln	Phe	Lys	Gly	Lys	Phe	Cys	Glu	Ile	Gly	Ser	Asp	180	185	190	
Asp	Cys	Tyr	Val	Gly	Asp	Gly	Tyr	Ser	Tyr	Arg	Gly	Lys	Met	Asn	Arg	195	200	205	
Thr	Val	Asn	Gln	His	Ala	Cys	Leu	Tyr	Trp	Asn	Ser	His	Leu	Leu	Leu	210	215	220	
Gln	Glu	Asn	Tyr	Asn	Met	Phe	Met	Glu	Asp	Ala	Glu	Thr	His	Gly	Ile	225	230	235	240
Gly	Glu	His	Asn	Phe	Cys	Arg	Asn	Pro	Asp	Ala	Asp	Glu	Lys	Pro	Trp	245	250	255	
Cys	Phe	Ile	Lys	Val	Thr	Asn	Asp	Lys	Val	Lys	Trp	Glu	Tyr	Cys	Asp	260	265	270	
Val	Ser	Ala	Cys	Ser	Ala	Gln	Asp	Val	Ala	Tyr	Pro	Glu	Glu	Ser	Pro	275	280	285	
Thr	Glu	Pro	Ser	Thr	Lys	Leu	Pro	Gly	Phe	Asp	Ser	Cys	Gly	Lys	Thr	290	295	300	

Glu Ile Ala Glu Arg Lys Ile Lys Arg Ile Tyr Gly Gly Phe Lys Ser
 305 310 315 320
 Thr Ala Gly Lys His Pro Trp Gln Ala Ser Leu Gln Ser Ser Leu Pro
 325 330 335
 Leu Thr Ile Ser Met Pro Gln Gly His Phe Cys Gly Gly Ala Leu Ile
 340 345 350
 His Pro Cys Trp Val Leu Thr Ala Ala His Cys Thr Asp Ile Lys Thr
 355 360 365
 Arg His Leu Lys Val Val Leu Gly Asp Gln Asp Leu Lys Lys Glu Glu
 370 375 380
 Phe His Glu Gln Ser Phe Arg Val Glu Lys Ile Phe Lys Tyr Ser His
 385 390 395 400
 Tyr Asn Glu Arg Asp Glu Ile Pro His Asn Asp Ile Ala Leu Leu Lys
 405 410 415
 Leu Lys Pro Val Asp Gly His Cys Ala Leu Glu Ser Lys Tyr Val Lys
 420 425 430
 Thr Val Cys Leu Pro Asp Gly Ser Phe Pro Ser Gly Ser Glu Cys His
 435 440 445
 Ile Ser Gly Trp Gly Val Thr Glu Thr Gly Lys Gly Ser Arg Gln Leu
 450 455 460
 Leu Asp Ala Lys Val Lys Leu Ile Ala Asn Thr Leu Cys Asn Ser Arg
 465 470 475 480
 Gln Leu Tyr Asp His Met Ile Asp Asp Ser Met Ile Cys Ala Gly Asn
 485 490 495
 Leu Gln Lys Pro Gly Gln Asp Thr Cys Gln Gly Asp Ser Gly Gly Pro
 500 505 510
 Leu Thr Cys Glu Lys Asp Gly Thr Tyr Tyr Val Tyr Gly Ile Val Ser
 515 520 525
 Trp Gly Leu Glu Cys Gly Lys Arg Pro Gly Val Tyr Thr Gln Val Thr
 530 535 540
 Lys Phe Leu Asn Trp Ile Lys Ala Thr Ile Lys Ser Glu Ser Gly Phe
 545 550 555 560

<210> 4

<211> 560

<212> PRT

<213> Homo sapiens

<400> 4

Met Phe Ala Arg Met Ser Asp Leu His Val Leu Leu Leu Met Ala Leu
 1 5 10 15

Val	Gly	Lys	Thr	Ala	Cys	Gly	Phe	Ser	Leu	Met	Ser	Leu	Leu	Glu	Ser	20	25	30	
Leu	Asp	Pro	Asp	Trp	Thr	Pro	Asp	Gln	Tyr	Asp	Tyr	Ser	Tyr	Glu	Asp	35	40	45	
Tyr	Asn	Gln	Glu	Glu	Asn	Thr	Ser	Ser	Thr	Leu	Thr	His	Ala	Glu	Asn	50	55	60	
Pro	Asp	Trp	Tyr	Tyr	Thr	Glu	Asp	Gln	Ala	Asp	Pro	Cys	Gln	Pro	Asn	65	70	75	80
Pro	Cys	Glu	His	Gly	Gly	Asp	Cys	Leu	Val	His	Gly	Ser	Thr	Phe	Thr	85	90	95	
Cys	Ser	Cys	Leu	Ala	Pro	Phe	Ser	Gly	Asn	Lys	Cys	Gln	Lys	Val	Gln	100	105	110	
Asn	Thr	Cys	Lys	Asp	Asn	Pro	Cys	Gly	Arg	Gly	Gln	Cys	Leu	Ile	Thr	115	120	125	
Gln	Ser	Pro	Pro	Tyr	Tyr	Arg	Cys	Val	Cys	Lys	His	Pro	Tyr	Thr	Gly	130	135	140	
Pro	Ser	Cys	Ser	Gln	Val	Val	Pro	Val	Cys	Arg	Pro	Asn	Pro	Cys	Gln	145	150	155	160
Asn	Gly	Ala	Thr	Cys	Ser	Arg	His	Lys	Arg	Arg	Ser	Lys	Phe	Thr	Cys	165	170	175	
Ala	Cys	Pro	Asp	Gln	Phe	Lys	Gly	Lys	Phe	Cys	Glu	Ile	Gly	Ser	Asp	180	185	190	
Asp	Cys	Tyr	Val	Gly	Asp	Gly	Tyr	Ser	Tyr	Arg	Gly	Lys	Met	Asn	Arg	195	200	205	
Thr	Val	Asn	Gln	His	Ala	Cys	Leu	Tyr	Trp	Asn	Ser	His	Leu	Leu	Leu	210	215	220	
Gln	Glu	Asn	Tyr	Asn	Met	Phe	Met	Glu	Asp	Ala	Glu	Thr	His	Gly	Ile	225	230	235	240
Gly	Glu	His	Asn	Phe	Cys	Arg	Asn	Pro	Asp	Ala	Asp	Glu	Lys	Pro	Trp	245	250	255	
Cys	Phe	Ile	Lys	Val	Thr	Asn	Asp	Lys	Val	Lys	Trp	Glu	Tyr	Cys	Asp	260	265	270	
Val	Ser	Ala	Cys	Ser	Ala	Gln	Asp	Val	Ala	Tyr	Pro	Glu	Glu	Ser	Pro	275	280	285	
Thr	Glu	Pro	Ser	Thr	Lys	Leu	Pro	Gly	Phe	Asp	Ser	Cys	Gly	Lys	Thr	290	295	300	
Glu	Ile	Ala	Glu	Arg	Lys	Ile	Lys	Arg	Ile	Tyr	Gly	Gly	Phe	Lys	Ser	305	310	315	320

Thr Ala Gly Lys His Pro Trp Gln Ala Ser Leu Gln Ser Ser Leu Pro
 325 330 335
 Leu Thr Ile Ser Met Pro Gln Gly His Phe Cys Gly Gly Ala Leu Ile
 340 345 350
 His Pro Cys Trp Val Leu Thr Ala Ala His Cys Thr Asp Ile Lys Thr
 355 360 365
 Arg His Leu Lys Val Val Leu Gly Asp Gln Asp Leu Lys Lys Glu Glu
 370 375 380
 Phe His Glu Gln Ser Phe Arg Val Gln Lys Ile Phe Lys Tyr Ser His
 385 390 395 400
 Tyr Asn Glu Arg Asp Glu Ile Pro His Asn Asp Ile Ala Leu Leu Lys
 405 410 415
 Leu Lys Pro Val Asp Gly His Cys Ala Leu Glu Ser Lys Tyr Val Lys
 420 425 430
 Thr Val Cys Leu Pro Asp Gly Ser Phe Pro Ser Gly Ser Glu Cys His
 435 440 445
 Ile Ser Gly Trp Gly Val Thr Glu Thr Gly Lys Gly Ser Arg Gln Leu
 450 455 460
 Leu Asp Ala Lys Val Lys Leu Ile Ala Asn Thr Leu Cys Asn Ser Arg
 465 470 475 480
 Gln Leu Tyr Asp His Met Ile Asp Asp Ser Met Ile Cys Ala Gly Asn
 485 490 495
 Leu Gln Lys Pro Gly Gln Asp Thr Cys Gln Gly Asp Ser Gly Gly Pro
 500 505 510
 Leu Thr Cys Glu Lys Asp Gly Thr Tyr Tyr Val Tyr Gly Ile Val Ser
 515 520 525
 Trp Gly Leu Glu Cys Glu Lys Arg Pro Gly Val Tyr Thr Gln Val Thr
 530 535 540
 Lys Phe Leu Asn Trp Ile Lys Ala Thr Ile Lys Ser Glu Ser Gly Phe
 545 550 555 560